Heimdal, Monica

From: John Brunini [jbrunini@brunini.com]
Sent: Thursday, August 29, 2013 3:03 PM
To: Kato, Linda
Cc: Heimdal, Monica
Subject: RE: BIP 40
Attachments: Carlson McCain Qualifications - Wetland.pdf

Ms. Kato and Ms. Heimdal,

Attached to this email, please find a statement of qualifications for Carlson McCain, Inc. BIP 40 is proposing to engage Carlson McCain to prepare the restoration plan which will be required in this matter.

Please contact me if you have any questions about the attached. If BIP 40's proposed engagement of Carlson McCain, Inc. to prepare this plan meets with your approval, please notify me so that we may formalize the engagement and Carlson McCain may begin drafting the plan as soon as possible.

Thanks,
JB

John A. Brunini
E: jbrunini@brunini.com
P: 601-973-8712 F: 601-960-6902

The Pinnacle Building
190 East Capitol St, Suite 100, Jackson, MS 39201
Post Office Drawer 119, Jackson, MS 39205

www.brunini.com
Bio / V-Card

From: Kato, Linda [mailto:Kato.Linda@epa.gov]
Sent: Thursday, August 22, 2013 5:40 PM
To: John Brunini
Cc: Heimdal, Monica
Subject: BIP 40

Mr. Brunini –

As I mentioned in my voice message, I am the attorney who has been assigned to handle the BIP 40 matter. I'm sorry we weren't able to connect via telephone, but I wanted to convey some information to you without further delay. I have been given a copy of your August 21 letter, addressed to Ms. Heimdal. Please note that we appreciate your client's desire to expeditiously commence restoration of the site. In order to make sure that it is completed without complication, a restoration plan should be drafted by your environmental consultant and submitted to Ms. Heimdal for review and approval. Once everyone is in agreement as to how the restoration should be conducted, the project may commence. Please advise your client that the work should not start until the plan is approved, and that we will work with your client to expedite this matter.

As a first step, please have your client submit the name and qualifications of the environmental consultant to Ms. Heimdal, who will notify your client if there are any objections to the consultant. The consultant should then prepare the restoration plan according to EPA guidelines, which I have attached here. If the consultant or your client has questions about the development of the plan, please refer them to Ms. Heimdal.

In the meantime, we will be preparing a draft Administrative Order on Consent for your review. This document will formalize our agreement regarding restoration of the site. If you have any questions regarding our agreement or agency procedures, please feel free to call me. Any questions from your client of a technical nature should be directed to Ms. Heimdal.

Thank you for your cooperation. I look forward to meeting you.

Linda S. Kato
Enforcement Counsel
U.S. EPA Region 8
Mail Code ENF-L
1595 Wynkoop
Denver, CO 80202
(303) 312-6852
kato.linda@epa.gov

Qualifications Statement

Carlson McCain, Inc.

Carlson McCain

ENVIRONMENTAL • ENGINEERING • LAND SURVEYING

Table of Contents

Offices

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5300 Highway 12, PO Box 429 | Maple Plain, MN 55359
Phone 952-346-3900 | Fax 952-346-3901

www.carlsonmccain.com

INTRODUCTION

Carlson McCain, Inc. specializes in environmental, engineering, and land surveying services. Through our offices in Lino Lakes, and Maple Plain, Minnesota; and Bismarck, North Dakota, we provide comprehensive turnkey services for our governmental, utility, private developers, institutional and industrial clients. Our staff of professionals includes:

- Civil engineers
- Environmental engineers
- Land surveyors
- Geologists / hydrogeologists
- Environmental scientists
- Industrial hygienists
- Botanists
- Biologists
- Wetland specialists
- Drafters/GIS specialists

In 2011, Carlson Professional Services, Inc. and McCain and Associates, Inc. merged to form Carlson McCain, Inc. The blend of our respective resources substantially strengthens our overall capabilities. Carlson was established in 2009 through the reorganization of our previous company (founded in 1997) specializing in environmental, engineering and land surveying services. Founded in 2002, McCain specializes in civil engineering and environmental consulting. The same teams of professionals assembled over the years at our previous companies continue to provide environmental, engineering and land surveying services under the Carlson McCain name.

The unique combination of Carlson McCain staff accommodates a variety of projects such as commercial/industrial properties, subdivisions (multi- and single-family residential, commercial, mixed-use), parks, educational facilities, Brownfield redevelopment, landfills, roads, trails, transmission lines, pipelines, and underground storage tanks. Carlson McCain has an excellent working knowledge of the ever changing regulatory and natural resource management issues. The following information outlines our services.

ENVIRONMENTAL SERVICES

Carlson McCain clients have learned that our advice is reliable and our technical expertise expands across the full spectrum of environmental problem-solving. Our project teams routinely perform site investigations and assessments, and develop strategies consistent with our clients' objectives, and in accordance with applicable laws and guidance documents.

Carlson McCain has provided wetland services in North Dakota for over 10 years.

Natural Resources

Wetlands

Wetland delineation and classification
Permitting and mitigation design
Restoration monitoring
Bank development and documentation

Wildlife Surveys

Endangered, threatened and sensitive species surveys
Avian (breeding bird counts, prairie grouse led, raptor)

Mammal (small mammal trends, big-game distribution and habitat use, prairie dog colony)
Amphibian/reptile
Aquatic inverts sampling and identification
Fisheries - stream and lake sampling
Habitat classifications and evaluation

Vegetation Assessments

Endangered, threatened and sensitive species surveys
Complete floristic surveys
Cover and yield measurements
Range site and plant community classification and delineation
Noxious weed inventories

GIS / GPS / Mapping

Project design and management
Sub-foot GPS data accuracy
Geodatabase design
Natural resources mapping
Project area cumulative effects calculations

Permitting

NEPA (EIS, EAW)
Local, state and federal agencies
Regulatory and public consultation

Site Investigation and Remediation

Brownfield redevelopment
Phase I and II environmental assessments
Transaction screen process
Regulated waste assessments
Underground storage tank assessment and removal
Groundwater flow/contaminant modeling
RCRA facility investigation and corrective measures studies
NEPA documentation
Voluntary investigation and cleanup
Remediation engineering design, soil and ground water sampling and analysis
Ecology (threatened and endangered species, cultural resources, etc.)
Risk assessments
Regulatory permitting

Land Surveying Services

ALTA/ACSM surveys
Concept plans
Preliminary plats
Final plats
Condominium plats
Topographic surveys

Well plat design and submittal package
Right-of-Way (ROW) and Environmental Assessment (EA) onsites for well pad expansion and proposed well pad sites
Well site asbuilts for facility redesign and expansion
North Dakota One Call response for small utility and pipeline locates and asbuilts
Utility Right-of-Way corridor gathering lines
Easement descriptions and parcel drawings
Municipal sewer and petroleum pipeline plan and profile
Landfill construction staking and certification
Grading certifications
Survey and Grading Design for Central Distribution Points/ Tank Battery
As-built surveys
Aerial control surveys, Opus and Blue Book control
Construction plats and plan profile for pipe design and asbuilt
Government corner restoration
Geographic Information Systems (GIS) – import and export shapefiles for site specific data; convert data to various geographic systems
Construction staking for site and pipeline construction

ENGINEERING SERVICES

Engineers licensed in: Minnesota, Wisconsin, Illinois, Iowa, North Dakota, South Dakota, Michigan, Montana, Virginia

Civil Engineering

Land Development

Concept plans
Preliminary site analysis
Feasibility studies/due diligence
Infrastructure layout and planning
Drainage analysis
Preliminary plan approval
Design for grading, sanitary sewer, water main, storm sewer and streets
Earthwork balances, volume calculations
Final construction plans and specifications
Regulatory permitting
Storm water management plans
Erosion control plans
Flood analysis and FEMA map revisions
Storm Water Pollution Prevention Plan (SWPPP) development and management
National Pollution Discharge Elimination System (NPDES) permitting, monitoring and report management
Construction observation
Project management and Contract administration
Street reconstruction
Turning movement analysis

Environmental Engineering

Waste Management

Siting, design and permitting of demolition, industrial, and solid waste landfills
Landfill gas management (collection, treatment, utilization)

Site optimization and cost analysis
Environmental monitoring
Liner/final cover design
Operations plans
Impoundment investigation and expansion
'Upstream' ash management and vertical pond expansion
FGD sludge ponds
NSPS design and implementation
Gas extraction and gas-to-energy
Phase development plans
Hydrogeologic investigations
Site capping
Leachate collection and treatment
Closure and compliance management
End-use planning

Construction Support

Field observation/documentation/certification
Material inventory and testing
Construction management
Surveying

Investigation and Remediation

Soil and ground water remediation
System monitoring and operations
Corrective action design
Feasibility studies and alternatives analysis
Material management (drums, sediment, sludge, etc.)

Surface Water and Wetlands

NPDES/SDS permitting
Sample collection and analysis
Storm water and erosion controls
Reporting of monitoring data
Design and management of environmental databases
Spill Pollution Control and Countermeasures (SPCC) plans

Geotechnical

Evaluation of subsurface conditions
Evaluation of borrow sources
Groundwater level evaluations
Boring log preparation

Related Project Experience

Federal Highway Administration – Roads Acting as Dams

This project evaluated an 880 acre potential wetland mitigation site to compensate for wetland impacts due to the Federal Highway Administration (FHWA) Roads-Acting-As-Dams project along Devils Lake. A scope and effect study was conducted to aid in the determination of potential wetland mitigation credits. Wetland mitigation credits were determined and submitted to the FHWA. The second phase of the project involved developing a wetland mitigation plan for a 264 acre site located within the original 880 acres. The wetland migitation plan developed for the site followed the guidance of *Wetland Mitigation Banking in North Dakota, Interagency Guidance for Mitigation Bank Sponsors* and was reviewed by the US Fish and Wildife Service (USFWS). Approximately 55.4 wetland mitigation credits were developed within the mitigation site. Construction of the site occurred in 2012. Carlson McCain started monitoring the site in 2013 to determine success criteria according to the plan. Monitoring is expected to be performed yearly for at least three years.

Natural Resource Conservation Service – Scope and Effect Determinations

This project involved conducting wetland determinations on approximately 16,000 acres in Barnes and Grand Forks Counties, North Dakota, for the Natural Resource Conservation Service (NRCS). The wetland determinations involve delineating wetlands following the guidelines set forth by the *United States Army Corps of Engineers, March 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)* and NRCS guidelines set forth in the Highly Erodible Land Conservation and Wetland Conservation Compliance provisions (Swampbuster, introduced in the 1985 Farm Bill) and the National Food Safety Act Manual. These scope and effect determinations evaluate the degree of manipulation that has impacted wetlands.

Jamestown Regional Airport – Wetland Mitigation

This project identified and developed a wetland mitigation site to compensate for wetland impacts due to expansion of the Airport. A suitable site of approximately 140 acres was located and identified in Towner County, ND. Carlson McCain identified eight previously-manipulated wetland and determined that approximately 20 wetland mitigation credits could be developed. A mitigation site plan and associated monitoring plan was developed for the site following the guidance of *Wetland Mitigation Banking in North Dakota, Interagency Guidance for Mitigation Bank Sponsors* and reviewed by the USFWS. A USFWS wetland easement was secured on the mitigation wetlands. The site was constructed in 2008 and monitoring commenced the following year. The mitigation wetlands have been monitored for four years and have developed wetland functions.

CARLSON MCCAIN STAFF

Individual resumes of qualified staff assigned to this project are following.

Greg W. Meyer

Wildlife Biologist/Ecologist

Education
M.S., Wildlife Biology, 2004
University of North Dakota
B.A., Biology/Chemistry, 2000
Concordia College

Certification
Wetland Delineator Certified, Minnesota

Training
NRCS Hydric Soils and Wetland Certification, 2008

Memberships
North Dakota Chapter of the Wildlife Society

Greg has over 12 years of experience in wetland delineations and mitigations, and wildlife and habitat research. His wetland experience includes wetland delineations and determinations, mitigation projects, scope and effect determinations, wetland health assessments, wetland vegetation studies, and wetland gas emission studies. Greg's wildlife and habitat experience includes avian surveys; raptor surveys; endangered, threatened, and sensitive plant and animal surveys for Biological Assessments and Evaluations; prairie dog surveys; botany surveys; habitat evaluations; and land inventories.

Project Experience

North Dakota Department of Transportation (NDDOT) Road Projects, Regulated Borrow Areas, and ND County Road Projects. Conducted numerous wetland delineations on NDDOT road projects and borrow areas throughout North Dakota. Identified and delineated all wetlands and Potential Other Waters of the U.S. in the project areas. Identified hydrophytic vegetation, hydric soils, and hydrology indicators as outlined in the USACOE wetland delineation guidelines and completed a USACOE wetland determination form for each observation point. Used a Trimble GeoXH GPS to collect the wetland boundary and observation points' spatial data, uploaded the data into GIS, and post-processed it for sub-meter accuracy. Utilized GIS to calculate the acreage of the delineated wetlands and create figures of the project sites and wetlands. Produced a wetland delineation report, following the guidelines set forth by the North Dakota Department of Transportation, consisting of: pertinent background information of the project area, USACOE Wetland Determination data sheets, project maps with evident delineated wetland boundaries, and field photographs of the project site. NDDOT and ND County road project wetland delineations include: ND HWY 19 (13 miles), ND HWY 40 and 50 (19 miles), ND HWY 50 (1 mile), ND HWY 23 (28 miles), ND HWY 8 (23 miles), ND HWY 40 (1 mile), Williston Temporary Truck Reliever Route (16 miles), US HWY 83 Bypass (6 miles), US HWY 85 (25 miles), Williston NW Bypass (16 miles), ND HWY 23 (35 miles), ND HWY 5 (11 miles), and Ross and Palermo Roads (Mountrail County).

Federal Highway Administration. Identified and delineated wetland areas along approximately 14 miles of roadways and a development site on the Turtle Mountain Reservation following the USACOE guidelines. Conducted a Scope and Effect Determination on an 880-acre site located in the upper Devils Lake Basin following NRCS guidelines. The site consisted of manipulated wetlands and non-manipulated wetlands. Determined

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the current and original hydric boundary of the manipulated wetlands, and calculated the current and original acreage and current and original depth of ponding. Developed a wetland mitigation plan utilizing the scope and effect determination results to provide restoration credits for various highway development projects in the area. The mitigation plan consisted of a mitigation strategy, site design, monitoring plan, success criteria, and contingency measures.

North Dakota State Land Department. Delineated the Ordinary High Water Mark (OHWM) along approximately 50 miles of portions of the Missouri and Yellowstone Rivers using multiple transects. Completed an OWHM Delineation Data Form for each transect and took numerous photographs. Identified hydrophytic vegetation above and below the OWHM site, and documented soil characteristics and other physical indicators at each transect OWHM site.

Private Client Linear Projects. Conducted wetland delineations along numerous linear projects for private clients, including a 70-mile-long transmission corridor for Ottertail Power Company, a 248-mile-long corridor for Minnkota Power Cooperative, and multiple pipelines for Enbridge Pipelines.

NRCS Wetland Determinations and Wetland Mitigation Plans. Conducted multiple wetland determinations and wetland mitigation plans for Farm Bill participants in Barnes, Dickey, Richland, Sargent, and Ward counties, and the NRCS in Barnes and Grand Forks counties in North Dakota. On-site field determinations and scope and effect determinations have been conducted on approximately 8,000 acres to facilitate the NRCS certified wetland determination process. Wetland delineations and wetland mitigation plans followed USACOE and NRCS guidelines, and the completed reports were submitted and approved by NRCS.

Mitigation Projects. Conducted multiple wetland mitigation projects in North Dakota. Wetland mitigation sites have been developed for a private producer and the Jamestown Airport. Both sites included the development of a wetland mitigation plan to compensate for proposed wetland impacts. Located and evaluated the mitigation sites. Worked closely with clients, mitigation site owner, NRCS, and USFWS to obtain approval of the sites and the developed mitigation plans. Nearly completed with the permitting, including the Mitigation Prospectus, Banking Instrument, and Banking Ledger, for the first privately held Wetland Mitigation Bank in North Dakota. Worked closely with client and NRCS to establish the Mitigation Bank.

Matthew Stasica

Natural Resource Specialist

Education

M.S., Natural Resource Management, 2012
North Dakota State University, Fargo

B.A., Environmental Studies, 2010
St. John's University, Collegeville, MN

Certification

Certified Wildland Fire Fighter, Red Card
Certified First Aid/CPR

Memberships

The North Central Chapter - Society of Wetland Scientists
The Wildlife Society - North Dakota Chapter

Training

Richard Chinn Environmental Training, Inc. - 38 Hour Army Corps of Engineers Wetland Delineation Training Program

ATV/RTV Safety Training Course

Agricultural Tractor Safety Training

Matthew is a natural resource specialist with three years of field experience. He specializes in wetland condition assessments and delineations. He also has experience conducting wildlife-habitat assessments and invasive species monitoring and control projects. He has experience with numerous types of vegetative and wetland sampling protocols and experimental design, data collection, management, and analysis. Matthew is also experienced in the collection and maintenance of data using Trimble GPS and ArcGIS.

Project Experience

Enbridge Pipelines Inc. Conducted wetland delineations using USACOE field forms and guidelines, and conducted habitat assessments for the Brigham Ross Pipeline Project, Plaza Pipeline Project, Beaver Lodge Loop Pipeline, and Saddle Butte Pipeline Project. Conducted nesting bird surveys along the proposed right-of-way. Inventoried trees and shrubs according to Public Service Commission specifications.

Natural Resources Conservation Service - Wetland Determinations. Conducted wetland determinations on approximately 8,000 acres in Barnes County, North Dakota and approximately 8,000 acres in Grand Forks County, North Dakota. Wetland Determinations consist of delineating wetlands using U.S. Army Corps of Engineers guidelines and conducting scope and effect determinations to understand the degree of manipulation to wetland basins.

North Dakota Department of Transportation. Conducted numerous wetland delineations on NDDOT road projects and borrow areas throughout North Dakota. Identified and delineated wetlands and Potential Other Waters of the U.S. within the project areas. Completed USACOE wetland determination forms and documented the Ordinary High Water Mark for rivers, creeks, and perennial waterways. Used a Trimble GeoXH GPS to delineate wetland boundaries and other spatial data in order to provide shape-file deliverables. Utilized ArcGIS to calculate the acreage of the delineated wetlands. Completed wetland delineation reports in accordance with North Dakota Department of Transportation guidelines consisting of: pertinent background information of the project area, USACOE Wetland Determination data sheets, project maps with delineated wetland boundaries, and field photographs of the project site. NDDOT road projects wetland delineations include: US HWY 85, ND HWY 23, Palermo Road, and several Borrow Sites.

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Belfield Landfill. Conducted wetland delineations using USACOE field forms and guidelines. Collected wetland boundaries data to assist in the creation of a soil profile map. Composed a report from field observations and field data.

City of Bismarck. Conducted wetland delineations identifying hydrophytic vegetation, hydric soils, and hydrology indicators using US Army Corps of Engineers (USACOE) data forms and guidelines. Using a Trimble Geo XH GPS, collected spatial data such as wetland boundaries, upland, and wetland points in order to provide shape-file deliverables. Created maps and composed reports detailing the field delineation results. City of Bismarck wetland delineations include Mills Avenue and Riverwood Drive, and Yegen Road.

BakkenLink Pipeline LLC. Conducted wetland delineations using USACOE field forms and guidelines, tree and shrub inventories, and wildlife surveys along the proposed route.

Northern Transload Facility. Conducted wetland delineations using USACOE field forms and guidelines, and conducted habitat assessments. Created maps and composed a report detailing the field delineation results.

Volkman Railroad Builders. Identified and delineated wetlands using USACOE field forms and guidelines. Created maps and composed a report detailing the field delineation results.

Turtle Mountain Band of Chippewa Indians. Identified and delineated wetlands using USACOE field forms and guidelines. Created maps and composed a report detailing the field delineation results.

Painted Woods Creek Golf Course. Conducted wetland delineations using USACOE field forms and guidelines. Created maps and composed a report for identified wetlands. Corresponded with Army Corps of Engineers to determine the jurisdiction of delineated wetlands.

1601 Channel Drive/1600 Industrial Drive, Bismarck, North Dakota. Conducted wetland delineations using USACOE field forms and guidelines. Created maps and composed a delineation report for identified wetlands. Corresponded with Army Corps of Engineers to determine the jurisdiction of delineated wetlands.

Miranda Meehan

Natural Resource Specialist

Education
PhD, Natural Resources Management: Riparian Ecology, 2011
M.S., Animal and Range Science, 2008
B.S., Animal and Range Science, 2005
North Dakota State University, Fargo

Memberships
Society for Range Management
- President Elect of North Dakota Chapter
Gamma Sigma Delta, The Honor Society of Agriculture

Certification
Wildland Fire Fighter, Red Card
First Aid/CPR
OSHA 10-Hour

Training
SRM ESD Workshop (2013)
NRCS Rangeland Health Workshop (2011)
NRCS Riparian Ecological Site Description Workshop (2009)

Miranda is a natural resources specialist with over 10 years of field experience. She specializes in range and riparian ecosystems, specifically in the identification of plants and stream morphology. She has vast experience with numerous types of vegetative, soil, and stream sampling protocol, and with experimental design, data collection, management, and analysis. Miranda also has extensive experience with public presentations and in writing grants, manuscripts, and reports.

Project Experience

Enbridge Pipelines Inc. Conducted wetland delineations and habitat assessments for threatened and endangered species along proposed Sanish pipeline and for the Berthold Station Expansion projects. Identified hydrophytic vegetation, hydric soils, and hydrology indicators as outlined in the U.S. Army Corps of Engineers (USACOE) wetland delineation guidelines. Conducted raptor and migratory bird surveys and inventoried trees and shrubs according to PSC specifications along the proposed Little Muddy and Beaver Lodge Loop pipeline projects.

North Dakota Department of Transportation. Conducted wetland delineations on NDDOT road projects throughout North Dakota. Identified and delineated wetlands and Potential Other Waters of the U.S. within the project areas. Completed USACOE wetland determination forms and identified hydrophytic vegetation, hydric soils, and hydrology indicators. Documented the Ordinary High Water Mark for rivers, creeks, or perennial waterways. Used a Trimble GeoXH GPS to delineate wetland boundaries and other spatial data in order to provide shape-file deliverables. Utilized ArcMAP to calculate the acreage of the delineated wetlands and create project maps. Completed wetland delineation reports in accordance with North Dakota Department of Transportation guidelines consisting of: pertinent background information of the project area, USACOE Wetland Determination data sheets, project maps with delineated wetland boundaries, and field photographs of the project site. NDDOT road projects wetland delineations include: Ross North County Road, Mills Avenue and Riverwood Drive and US HWY 5.

BakkenLink Pipeline LLC. Conducted wetland delineations, tree and shrub surveys and habitat assessments for threatened and endangered species along the proposed route and corridor. Conducted Biological Assessment and Evaluation on U.S. Forest Service land along the proposed route.

Turtle Mountain Band of Chippewa Indians. Conducted necessary correspondence, managed field crew, and wrote environmental report for Jackrabbit-Wilkie Road and Hospital Road projects. Identified and delineated wetlands using USACOE field forms and guidelines. Produced maps and composed a report detailing the field delineation results for Jackrabbit-Wilkie Road Project. Conducted consultations, filed required permits, and prepared Categorical Exclusions for the Highway Bike Path and Hospital Road projects.

Volkman Railroad Builders. Conducted necessary correspondence, managed field crew, and wrote wetland delineation report for Volkman Rail Project.

ONEOK. Conducted necessary correspondence, managed field crew, and wrote wetland delineation report for Crosby Compressor Station Project.

Minnesota Power (HDR Engineering, Inc.). Conducted wetland delineations, tree and shrub surveys and habitat assessments for threatened and endangered species for the Southwest Oliver 230kV Transmission Line project. Identified hydrophytic vegetation, hydric soils, and hydrology indicators as outlined in the U.S. Army Corps of Engineers (USACOE) wetland delineation guidelines and completed USACOE wetland determination forms for each observation point. Inventoried trees and shrubs according to PSC specifications within route right-of-way.

North Dakota State University. Riparian Ecological Site Description (ESD) Project - develop riparian ESDs for six streams in North Dakota. Identified range and riparian plant species; evaluated stream morphology using Rosgen's classification of natural streams; evaluated riparian health using Proper Functioning Condition protocol and Stream Visual Assessment Protocol; identified range and riparian plant species cover and production; assessed wildlife species and habitat within riparian ecosystem; conducted riparian ESD workshop; presented study and findings at meetings; and coordinated with agency personal, managed field crew conducting surveys, and prepared reports for project.

Kathie J. Kjar, PhD

Senior Ecologist/Botanist

Education

Ph.D. in Botany, North Dakota State University, Fargo, North Dakota, 1985

M.S. in Agronomy (Range Ecology emphasis), University of Nebraska at Lincoln, Lincoln, Nebraska, 1979

B.S. in Biology, Kearney State College, Kearney, Nebraska (now known as University of Nebraska at Kearney), 1977

Kathie has over thirty years experience in wildlife and plant research and reporting. She has conducted Biological Assessments and Evaluations and collected quantitative data for land grant colleges, federal offices, and coal companies. Kathie has conducted field evaluations of the ordinary high water mark (OHWM) and has evaluated historic aerial photography to determine OHWM location. Kathie has delineated wetlands and has experience with GPS and GIS data acquisition and preparation.

Project Experience

- **Enbridge Pipeline, Inc.** Prepared a Biological Survey Report for proposed pipeline on U.S. Army Corps of Engineer managed lands. Botanical and zoological species of concern, potential habitat, and plants of importance to the Indigenous Tribal Peoples were evaluated. Conducted a survey and prepared a Biological Assessment and Evaluation for portions of the pipeline on U.S. Forest Service lands.

- **Southwest Water Pipeline.** Preformed surveys for raptors, prairie grouse leks, burrowing owls, and plant species for the water pipeline corridor (approximately 70 miles in length) in the Little Missouri National Grasslands. Prepared Biological Assessment and Evaluation.

- **Confidential Oil and Gas Clients.** Surveyed areas and evaluated impacts for species of concern, raptors, wildlife, habitat, land use, and weeds for over 700 proposed projects on the Little Missouri National Grasslands. Projects have included oil well sites, pipeline routes (oil, gas, saltwater and fresh water), underground and overhead power lines, telephone lines, road upgrades, and borrow areas.

- **ND Department of Trust Lands and State Engineer.** Field assessed the OHWM on the Yellowstone River in North Dakota, and the Missouri River from Montana to Williston. The presence or lack of wetland species was used as the primary tool used to locate the OHWM. Canopy cover of existing vegetation was evaluated at increments along the river banks.

- **ND Department of Trust Lands.** Delineated the OHWM based on historic aerial photography. The area of the

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Missouri River that lies under Lake Sakakawea from the Ft. Berthold Indian Reservation to the Trenton Loop Area was evaluated. Vegetation identification by aerial photography was based on the knowledge of the growth characteristics of the dominant vegetation in the area.

- **ND State Engineer.** Field delineated the OHWM on a segment (<1 mile) on the north side of the Missouri River near Bismarck. The presence or lack of wetland species was used as the primary tool used to locate the OHWM.

- **United States Forest Service.** Collected quantitative data on 23 sensitive plant populations in McKenzie, Billings, Slope, and Golden Valley Counties, North Dakota. Located and mapped populations with GPS unit. Evaluated the habitat of each population including: percent cover of species, slope, elevation, topographic position, soil, phenology, and other features. Prepared report with methods, descriptions, population data, conclusions, and maps.

- **Minnesota DNR.** Collected baseline vegetation data on native prairie sites in Western Minnesota. Established 54 permanent vegetation transects and relévés Measured vegetation structure: visual obstruction readings, vegetation height, and litter depth. Estimated plant cover and species occurrence. Determined presence of quality and exotic indicators. Collected data on two relévés.

- **North Dakota Heritage Program.** Contracted to write reports for five proposed Research Natural Areas (RNA's) in western ND. Documented historical background, land uses, owners, and other land designations. Justified use as RNA's. Studied literature and documented distinguishing features, cover types, fauna, flora, geology, soils, cultural sites, and other data. Interpreted impacts and possible conflicts on minerals, grazing, watershed, recreation, wildlife, etc. Created maps for location, vegetation, contour and soils.

- **United States Forest Service.** Relocated and mapped known populations of Dakota Buckwheat (*Eriogonum visheri*). Population data was evaluated to obtain an overview of the status and condition of these populations in the Little Missouri and Grand River National Grasslands.